

Remarks/Arguments

Reconsideration of this application is requested.

RCE and Extension of Time

Requests for continued examination (RCE) and a two month extension of time are enclosed in response to the final Office Action mailed on October 24, 2007. The extended period for response expires on March 24, 2008.

Claim Status

Claims 1-5 were previously presented. Claim 1 is amended. Claims 2 and 3 are canceled without prejudice. Claims 1, 4 and 5 are now pending.

Claim Rejections – 35 USC 112

Claims 2 and 3 are rejected under 35 USC 112, second paragraph, as indefinite. In response, claims 2 and 3 are canceled without prejudice, rendering these grounds for rejection moot.

Claim Rejections – 35 USC 103

Claims 1-5 are rejected under 35 USC 103(a) as obvious over Hirota (JP 2002-260615). In response, applicant traverses the rejections and amends claim 1 to clearly distinguish over Hirota.

Hirota discloses a battery that includes a battery cell, a circuit board, a pair of connecting members, a connector and a molded resin portion integrating these elements. However, in the battery of claim 1, a resin path is provided between the connector and the circuit board. Moreover, claim 1 is further amended to recite that:

...a width of the connector is the same as a width of the side of the battery cell...

This amendment finds support, for example, at page 6, lines 17-20, of applicant's specification.

Hirota fails to disclose or suggest such a configuration. In Hirota, a connector 6 is connected and fixed to surface 5a of circuit board 5, and resin injected through

resin injection groove 14 into the cavity formed in metallic mold 10 spreads to the periphery of battery unit 2. As is clear from FIG. 5, which is a perspective exterior view of battery 1 (in particular, see hatched area 3, which is referred to as a "molded resin portion" in the present application), resin also spreads to the surface of connector 6 (the upper surface shown in FIGS. 1 and 5 of Hirota), and resin injected to the front end of the battery cell flows to the sides of the battery cell via the surface of connector 6.

In contrast, in the battery of amended claim 1, because the width of the connector (9) is substantially the same as the width of the sides (2a, 2b, 2c) of the battery cell (i.e., the thickness of battery cell 2), the visible wide surface of battery cell 2 shown in FIGS. 1-3, hereinafter referred to as "surface A", is substantially flush with the surface of connector 9 (or housing 11) located at the same side as surface A, hereinafter referred to as "surface B". Therefore, when the battery unit is placed in a metallic mold, the metallic mold contacts not only surface A of the battery cell, but also surface B of the connector, and flow of injected resin over surface B of the connector is thus prevented.

In addition, because the width of the connector is substantially the same as the width of the side faces of the battery cell, the backside surface of the battery cell on an opposite side of surface A (which is not visible in FIGS. 1-3), hereinafter referred to as "surface C", is substantially flush with the backside surface of the connector on an opposite side of surface B (which is not visible in FIGS. 1-3), hereinafter referred to as "surface D". Therefore, when the battery unit is placed in a metallic mold, the metallic mold contacts not only backside surface C of the battery cell, but also backside surface D of the connector, and thus flow of the injected resin over backside surface D of the connector is prevented.

Thus, by configuring the width of the connector to be substantially the same as the width of the side faces of the battery cell, flow of resin over the surface (surface B) and the backside surface (surface D) of the connector is prevented, and flow of resin over the top surface of the connector on which the external connecting

terminal (12) is provided is prevented, Sticking of resin to external connecting terminal 12 is thereby prevented. Furthermore, resin is effectively injected and flowed through the resin path provided between the connector and circuit board.


Since Hirota does not disclose or suggest there distinctive features of claim 1 or achieve the advantageous effects provided thereby, claim 1 and claims 4 and 5 dependent thereon are not obvious over Hirota. The rejections of claims 1, 4 and 5 under 35 USC 103(a) should therefore be withdrawn.

Conclusion

This application is now in condition for allowance. The Examiner is invited to contact the undersigned to resolve any issues that remain after consideration and entry of this amendment. Any fees due with this response may be charged to our Deposit Account No. 50-1314.

Respectfully submitted,
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